



RTCM

SC110 Sub-Committee

Emergency Beacons

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Radio Technical Committee for Maritime Services (RTCM)

- RTCM keeps its members informed about regional and international maritime radionavigation and radiocommunication policy issues, regulatory changes, and technical standards development.
- Our Special Committees provide a forum in which government and non-government members work together to develop technical standards and consensus recommendations in regard to issues of particular concern.
- We are actively engaged in the development of international standards for maritime radionavigation and radiocommunication systems through our involvement in:
 - the International Maritime Organization (IMO)
 - the International Electrotechnical Commission (IEC)
 - the International Organization for Standardization (ISO)
 - the European Telecommunication Standards Institute (ETSI, and COSPAS-SARSAT)
- We also contribute to the relevant work of:
 - the International Telecommunications Union (ITU)
 - the International Hydrographic Organization (IHO)
 - the International Association of Aids to Navigation and Lighthouse Authorities (IALA)
 - the Comité International Radio-Maritime (CIRM)



RTCM Special Committee SC110 on Emergency Beacons

- SC110's primary role is to develop and maintain standards for Emergency Beacons – 406 MHz EPIRBs, PLBs and Ship Security Alert Systems (SSAS)
- It is also involved in:
 - The work of SC119 on Marine Survivor Locator Devices
 - A joint committee with SC101 on VHF DSC Hand Portable Radios with GPS
 - Considering new technology and ideas and other related matters of interest to its members e.g. AIS EPIRB, other Satellite Systems
 - RTCM also plays a very active role in the work of Cospas-Sarsat and in particular in its yearly Joint Committee (JC) meetings



SC110 Main Work Areas

- Multi-Environment Beacon (MEB) Subcommittee and Updates to the RTCM 406 MHz PLB Standard
- Cospas-Sarsat JC-22 Input
- Guidance on the use of PLBs for Aircraft
- Performance Standards for GPS DSC VHF-FM Handheld Radios
- Future work plans include
 - Updating the RTCM 406 MHz EPIRB Standard
 - Updating the RTCM 406 MHz SSAS Standard



MEB Sub-committee Key Work Areas

- 406 MHz radiated output power and antenna beam pattern – **Complete** (covered by T.001 and T.007)
- 121.5 MHz radiated output power and antenna beam pattern – **Complete** (included in latest PLB standard)
- The ability of the Embedded GPS to provide position in the transmitted message – **Nearing Completion**
- Revision of PLB standard and suitability of labelling, manuals and environmental aspects – **Complete**



GPS Simulator Status Update

- We have established a Test Set Up
- We have a set of Simulated Scenarios (GPS Test Signals)
- We have an agreed Test Method
- We have completed a series of tests
- We still have to finalise a Test Procedure and Set Pass / Fail Criteria

PLB #	Land scenarios with locations	Percent success	Maritime scenarios with Locations	Percent success
1	20	47.6	32	82.1
2	5	11.9	22	56.4
3	10	23.8	29	74.4
4	28	66.7	32	82.1



Updated RTCM PLB Standard

- SC110 has just completed an update to its PLB standard, which should be published by the end of May
- The main changes that have been included in the latest version of the RTCM PLB standard are:
 - References updated to reflect latest C/S standards (T.001, T.007 and T.012)
 - Added Internal Navigation Device Timing requirements that front load the GPS Receiver operation
 - Improved PLB Labeling requirements added (e.g. location of GPS antenna and warning not to obstruct it, whether PLB floats or not, readability / intelligibility requirement, definition of operational configuration)



Updated RTCM PLB Standard

- The main changes that have been included in the latest version of the RTCM PLB standard are:
 - Improved PLB documentation requirements added (e.g. instructions on safe (hazardous cargos) transportation, details on connecting external GPS Receivers to the PLB)
 - Packaging Labeling requirements added (e.g. note that PLB does not meet regulatory carriage requirements for an ELT or EPIRB, details on whether PLB will float or not)
 - 121.5 MHz Off Ground Plane Radiated Power Test added
 - Annex G – reserved for future addition of Internal Navigation Device Test Methods and Test Procedures
 - Numerous other minor amendments and updates



Future SC110 Work

- RTCM will shortly start work on its EPIRB standard, to bring this into line with the updated version of IEC 61097-2 Edition 3 which was published earlier this year and already includes many of the changes that are in the RTCM PLB standard (e.g. 121.5 MHz Off Ground Plane Test).



Beacon Manufacturers Workshop 2008



Questions?

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